

REMARKS

Claims 1-16, 26-28 and 31-35 are pending herein.

I. The rejections of claims 26-28 under 35 U.S.C. § 112, as noted on page 3 of the Office Action.

Applicants respectfully note that claims 26-28 have been amended to clarify the structural components of the apparatus and remove the “means for” language. No new matter is added by the amendments. Support for the amendments is found on pages 7-9 of the present specification. Thus, it is respectfully asserted that the § 112 rejections have been overcome.

II. The obviousness rejections of claims 1-16, 26-28, and 31-35 based on Javidi (US 5,903,648) in view of Marom et al. (“Analysis of Spatial-Temporal Converters for All-Optical Communication Links”), as note don page 3 of the Office Action.

Thus USPTO respectfully rejects claims 1-16, 26-28, and 31-35 under 35 U.S.C. § 103(a) as being unpatentable over Javidi in view of Marom. Claims 1 and 31 are independent claims.

A. The cited references do not teach or suggest sampling the data in the spatial domain after the data has been received and converted to the spatial domain, as claimed in claims 1, 26, and 31.

Claim 1 claims in relevant part:

“transmitting the converted encrypted data;

receiving the transmitted encrypted data and converting the received encrypted data to the spatial domain;

sampling the received encrypted data **in the spatial domain after the data has been received and converted to the spatial domain.”**
(emphasis added)

Claims 26 and 31 claim similar limitations. Regarding these limitations, it is respectfully not seen where the cited references teach or suggest the claimed method quoted above.

For example, as the USPTO respectfully notes on page 4 of the Office Action, Javidi respectfully does not teach or suggest sampling data in the spatial domain after the data has

been received and converted to the spatial domain. Instead, the USPTO respectfully attempts to overcome this deficiency in Javidi by arguing on pages 2 and 4-5 of the Office Action that Marom teaches the specifically claimed sampling of claims 1 and 31.

Specifically, the USPTO respectfully alleges on pages 2 and 4-5 of the Office that the equation $x^\dagger = -n\Delta(\lambda_r / \lambda_w)$, as noted on page 2863 of Marom, teaches the specifically claimed sampling of claims 1, 26, and 31. However, Applicants respectfully assert **this equation of Marom is not a sampling term as respectfully argued by the USPTO.**

Instead, Applicants respectfully assert that **the equation $x^\dagger = -n\Delta(\lambda_r / \lambda_w)$ of Marom is merely used to indicate the positions of the peak values in equation 28.** This indication of peak values is respectfully completely different from the sampling in the spatial domain that is claimed in claims 1, 26, and 31.

Additionally, there is respectfully no indication that the equation $x^\dagger = -n\Delta(\lambda_r / \lambda_w)$ of Marom is used to sample the data. For example, if the equation $x^\dagger = -n\Delta(\lambda_r / \lambda_w)$ was meant to be a sampling factor in Marom, the equation $x^\dagger = -n\Delta(\lambda_r / \lambda_w)$ would be used in a δ -function or other sampling function multiplied by the equation 28 of Marom. As is clear from the text of Marom, **there is respectfully no δ -function or other sampling function in equation 28 of Marom, and thus equation 28 of Marom respectfully does not represent sampled data.** Therefore it is respectfully asserted that Marom does not teach or suggest sampling the received encrypted data in the spatial domain after the data has been received and converted to the spatial domain, as claimed in claims 1, 26, and 31.

Also, Applicants respectfully assert that it would not make technical sense in Marom to sample the received data in the spatial domain. For example, **in Marom, the original data is already recovered in the receiver.** In other words, if one were to threshold the reconstructed data in Equation 28 of Marom, the original binary data would be reconstructed. Thus, there is respectfully no technical reason to sample the data in the spatial domain after it is received, as claimed in claims 1, 26, and 31.

In contrast, page 16, lines 23-28 of the present specification describes one possible embodiment of the claimed sampling quoted above. Specifically, page 16 of the present specification notes that **after the data has been received and converted to the spatial domain, the data is sampled at $x = n\Delta$.** Additionally, equation 24 on page 16 of the

present specification indicates one possible embodiment of the data after the sampling. It is respectfully important to note that present equation 24 includes a term of $\delta(x - n\Delta)$, i.e., a δ -function, which clearly indicates that the received data is sampled in the spatial domain after the data is received, as claimed in claims 1, 26, and 31.

The claimed method quoted above is important and non-trivial because it provides significant advantages over conventional methods. For example, the sampling in the spatial domain helps to **avoid overlap in the decryption process**. In contrast, in Marom, the data is not encrypted and there is no sampling in the spatial domain after the transmission of the data, so the method in Marom would not result in the above advantages.

Thus, it is respectfully asserted that the cited references, taken either alone or in combination, do not teach or suggest all the claimed limitations of claims 1, 26, and 31. Therefore, it is respectfully asserted that claims 1, 26, and 31 are not obvious over the cited references.

C. The dependent claims.

As noted above, it is respectfully asserted that independent claims 1, 26, and 31 are allowable, and therefore it is further respectfully asserted that dependent claims 2-16, 27-28 and 32-35 are also allowable.

III. Conclusion.

Reconsideration and allowance of all of the claims is respectfully requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130.

Please contact the undersigned for any reason. Applicants seek to cooperate with the Examiner including via telephone if convenient for the Examiner.

Respectfully submitted,

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